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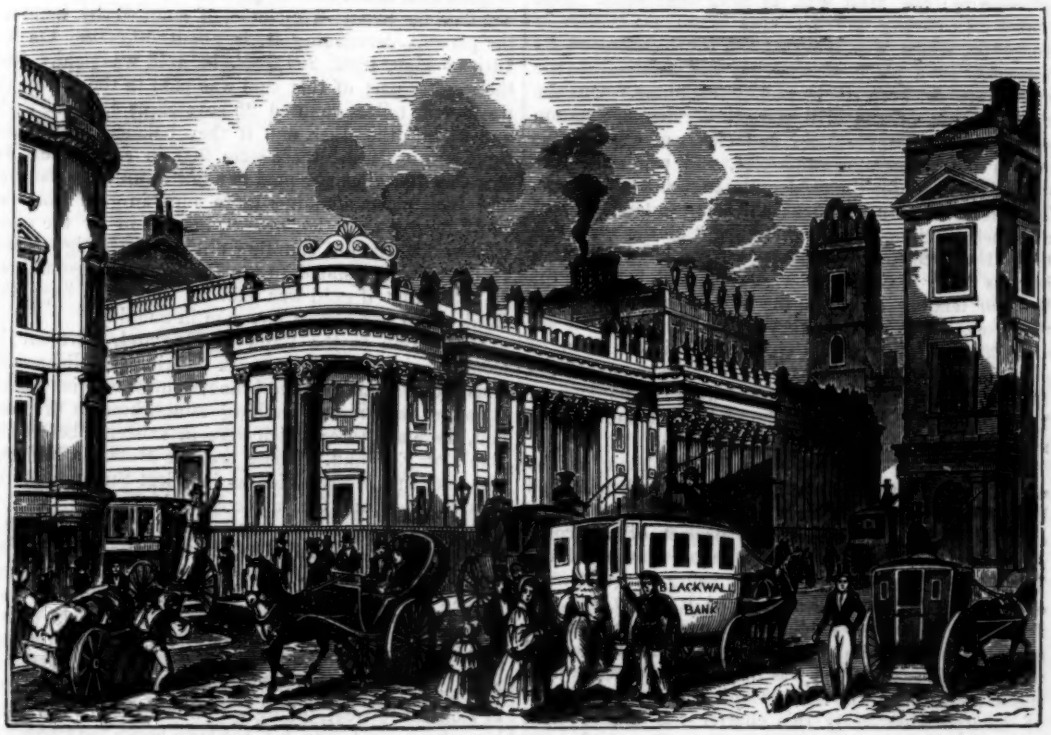
A LOOKING-GLASS FOR LONDON.—No. XIII.

COMMERCE—THE "BANK" AND BANKING.



[The Bank of England.]

THE "Bank" (as the Bank of England is commonly termed, by way both of distinction and abbreviation,) has been described in No. 156 of the 'Penny Magazine.' There appeared, also, in Volume V. a series of illustrations of "English Coins." This paper, therefore, will be confined to a brief view of the History and Present State of Banking in London.

The Jews and the Lombards were our earliest money-brokers. By Lombards, is generally understood merchants from the Italian republics of Genoa, Lucca, Florence, and Venice. Stow, describing the streets in the vicinity of the present buildings of the Bank and Royal Exchange, says, "Then have ye Lombard Street, so called of the Longobards and other merchants, strangers of divers nations, assembling there twice every day, of what original or continuance I have not read of record, more than that Edward II., in the twelfth year of his reign, confirmed a messuage sometime belonging to Robert Turke, abutting on Lombard Street toward the south, and toward Cornhill on the north, for the merchants of Florence: which proveth that street to have had the name of Lombard Street before the reign of Edward II." In a statute of the twenty-fifth year of Edward III. it is said, "Whereas, much people of the realm which have made contracts with Lombards, that be named of the companies dwelling in the same realm, which Lombards, after that they have made their obligations to their creansours [creditors], have suddenly escaped out of the realm without agreement made to their said creansours, in deceit and great damage of the people: It is accorded and assented,—That if any merchant of the company acknowledge himself bound, that the company shall answer of the debt. So that another merchant which is not of the company shall not be thereby grieved or impeached."

In the narrow street called Old 'Change, which runs from Cheapside towards the river, was formerly the office of the King's Exchanger. The exchanging of the coin of the realm for foreign coin or bullion was early held to be an especial royal prerogative—a "flower of the crown." The "statute concerning False Money," passed in 1299 (27 Ed. I.), inflicted the penalty of loss of goods and life for bringing in base money into the country; but permitted all persons, of whatever country or nation, to bring "to our Exchange all sorts of money of good silver, of whatever foreign coin or whatever value they may be." In the Act of Edward III., already quoted, "It is accorded, that it shall be lawful for every man to exchange gold for silver, so that no man hold nor take profit for making such exchange, upon forfeiture of the money so exchanged: except the King's Exchangers, which take profit of such exchange, according to the ordinance made."

The goldsmiths, however, became dealers in foreign coin, and in spite of the king's Exchanger, took "profit for making such exchange." Their shops were chiefly on the south side of Cheapside, and extended from the Old 'Change to Bucklersbury. There were goldsmiths also in Lombard Street. Whatever may have been done between individuals in the way of lending and borrowing money, (taking interest for the use of money was not allowed by law till 1546) the practice could not be general; for down to the year 1640, the merchants of London were in the habit of lodging their money at the Mint, in the Tower of London, as a place of security; the Mint was, in fact, their bank. But Charles I. having in that year taken possession of 200,000*l.*, which was lying at the Mint, destroyed its character as a place of security, and compelled the merchants to keep their money at home. On the breaking out of the civil war, it became a common practice for the apprentices and clerks of the citizens to rob their masters or employers, and run off. This opened the way for the goldsmiths to become bankers. They received money in trust, allowing interest for it, and their receipts, or acknowledgment of the sums entrusted with them, began to pass from hand to hand, just as bank notes do now. They had been in the habit of lending money to the king, on the security of the taxes. This practice they extended to private individuals, on the security either of their credit or of goods; and thus, previous to the establishment of the Bank of England, the goldsmiths were the bankers of London, and had laid the foundation of the present metropolitan banking system.

The Bank of England—the largest bank in the world—was founded in 1694. Several schemes had been suggested by different individuals for a banking establishment; but at last the project of a Scotch gentleman of the name of Patterson was acted on. The government of William III. being in great want of money, it was proposed to lend it 1,200,000*l.*, on the condition of the lenders receiving a charter of incorporation as a banking company. This was agreed to: the subscription list was filled in ten days, and on the 27th of July, 1694, the Bank received its charter of incorporation. By this charter the management of the Bank was committed to a governor, deputy-governor, and twenty-four directors. The charter was at first limited to eleven years; but it has been renewed at successive periods since—the last renewal was in 1833, when it was extended till 1855, with a proviso that in 1845, if Parliament think fit, and the money owing by government to the Bank be paid up, the charter can then be withdrawn. Some alterations were made in the management of the Bank, on the renewal of the charter in 1833, and it was then directed that a statement of the affairs of the Bank should be sent weekly to the Chancellor of the Exchequer, and that an average statement of these accounts should be published quarterly.

The amount of money lent by the Bank to government gradually increased; in 1833 it was 14,686,804*l.* It has since been reduced to 11,015,100*l.* This large sum is the security given to the public for the solidity of the Bank.

The "Bank" is certainly an enormous pile of building. It was referred to the late Sir John Soane to say what he thought would be a fair rent for the Bank, used as it is for its present purposes. His opinion was, that 35,000*l.* per annum was a fair charge for rent, and 5000*l.* for fixtures, repairs, &c., making 40,000*l.* In 1832, there were employed at the Bank 820 clerks and porters, and 38 printers and engravers; and there were also 193 pensioners, chiefly superannuated clerks, who received in pensions 31,243*l.*, averaging 161*l.* to each. In the same year the salaries and pensions amounted to 218,003*l.*, the house expenses to 39,187*l.*, the directors' allowance was 8000*l.*, and the rent, &c., was set down, as already stated, at 40,000*l.* The salaries of the officers at the branch banks in the country amounted to 25,000*l.*

The principal rooms of the Bank are freely open to the public during banking hours. Speaking of the pay-hall, the Baron Dupin, in his 'Commercial Power of Great Britain,' says, "The administration of a French *bureau*, with all its *inaccessibilities*, would be startled at the view of this hall!" The largest amount of gold coin that could be paid in the banking hours of one day by twenty-five clerks, if counted by hand to the persons demanding it, is about 50,000*l.* On the 14th of May, 1832, 307,000*l.* in gold was paid. But the greater part of this sum was paid in the following way:—the tellers counted 25 sovereigns into one scale and 25 into the other, and if they balanced, continued the operation until there were 200 in each scale. In this way 1000*l.* can be paid in a few minutes. Bankers and other persons taking large sums in gold from the Bank receive them by weight, instead of by the more tedious operation of counting out each sovereign. Mr. Horsely Palmer stated to the Parliamentary committee of 1832, that if gold was paid by weight, in bags, the Bank could pay almost any sum in one day.

In addition to the Bank of England, there are, in London, at present, seventy-six banking establishments. This includes four or five branches of provincial banks. Amongst the present banking establishments of London, there are three which were in existence before the Bank of England. These are, the Messrs. Child and Co. and the Messrs. Hoares in Fleet Street, and the Messrs. Snow and Co. in the Strand.

About the year 1775 the bankers of the "city" set on foot an economical plan for the purpose of saving both time and money. They established the Clearing House in Lombard Street. A great part of the payments which are made to and by bankers in the course of a day, are made on the authority of cheques, or bills of exchange. At certain hours in each day, a clerk goes from each banking establishment to the Clearing House in Lombard Street, taking with him all the drafts which have been paid into his banking-house addressed to other bankers. These are placed in drawers, which are allotted in the Clearing House to each banker. Each clerk gives credit for the drafts which he finds in his own drawer, against the drafts which he has placed in the drawers of other bankers. By this means, the cheques drawn on one banker are cancelled by the cheques which he holds on others. After four o'clock on each day balances are struck. In 1810, when forty-six banks settled with each other at the Clearing House, the daily amount of accounts which were thus cancelled varied from 5,000,000*l.* to as high as 15,000,000*l.*; while the actual money, or bank-notes, required to pay off odd balances was only from 250,000*l.* to 500,000*l.* Mr. Gilbart, the present manager of the London and Westminster Bank, states, in his 'History of Banking,' published in 1834, that in that year the number of bankers who settled with each other at the Clearing House was only thirty. The number is probably increased at present. There are two inspectors at the Clearing House, with salaries, whose business is to superintend, and detect errors which may be made by clerks in the hurry of business. The "west-end" bankers are not connected with the Clearing-House.

Lombard Street still preserves much of its old character. Stow describes it as "throughout graced with good and lofty buildings, amongst which are many that surpass those in other streets, and generally is inhabited by goldsmiths, bankers, mercers, and other eminent

tradesmen." It was destroyed in the Great Fire of 1666; but at the present day it is still inhabited by "bankers and other eminent tradesmen." There are sixteen banking establishments in it, besides stock and bill-brokers.

Mr. Gilbart states that the first RUN in the history of Banking in this country occurred in 1667, twenty-seven years before the establishment of the Bank of England. The Dutch Admiral, De Ruyter, had taken Sheerness, and had sent his vice-admiral, Van Ghent, up the Medway to destroy Chatham. The greatest alarm prevailed in London; and we learn from Pepys's 'Diary,' that confusion and imbecility prevailed in the councils of the government. The citizens ran to their goldsmiths or bankers to withdraw their money. Various efforts were made to restore confidence. There was another extraordinary *Run* in 1745 on the Bank of England, when the army of the Pretender was rapidly marching on the metropolis. A public meeting was held, and upwards of a thousand merchants signed a declaration expressing their readiness to take bank notes. At that critical period the Bank paid cash in silver instead of gold to gain time. A still more remarkable run, from the consequences which it produced, was in 1797. Fears of foreign invasion prevailed, the government required money, and public confidence was shaken. On Saturday the 25th of February, 1797, there was only 1,270,000*l.* in coin and bullion remaining in the coffers of the bank. On Monday an order in council was distributed among the crowd assembled at the Bank to demand gold, intimating that government had exempted the Bank from payments in cash. It was then that notes for so small a sum as 1*l.* were authorized to be issued. The restriction of cash payments continued during the long and expensive war. The Bank made an effort to return to cash payments from 1817 to 1819; but it was not till the 1st of May, 1821, that payments in specie legally and permanently commenced. Since that time, except for a short period at the end of 1825, Bank of England notes under 5*l.* have been withdrawn from circulation, and ultimately all bank notes under 5*l.* were prohibited throughout England.

Many of the readers of the 'Penny Magazine' will remember what is termed the "panic" of 1825. The run on the Bank of England was the greatest that had taken place since 1797. In April or May, 1825, the Bank had about 10,000,000 of bullion, and by November it was reduced to 1,300,000*l.* During the run, gold was handed over as soon as called for, in bags of twenty-five sovereigns each. But at that critical time, says a Bank Director, "bullion came in, and the Mint coined; they worked double tides,—in short they were at work night and day; we were perpetually receiving gold from abroad, and coin from the Mint." In one day the Bank discounted 4200 bills. On the 8th of December, 1825, the discounts at the Bank were 7,500,000*l.*; on the 15th they were 11,500,000*l.*; on the 22nd 14,500,000*l.*; and on the 29th they were 15,000,000*l.* The annual average of commercial paper under discount at the Bank was 2,946,500*l.* in 1795; in 1800 it was 6,401,900*l.*; from 1805 to 1816 it varied from 11,000,000*l.* to 20,000,000*l.*; from 1817 to 1826 it varied from about 2,000,000*l.* to 6,000,000*l.*; in 1830 it was only 919,900*l.*, and in 1831, 1,533,600*l.* The annual average of loss by bad debts on discounts has been, from 1795 to 1831, both inclusive, 31,696*l.*

The Bank of England acts as the chief agent of the Government in the management of the National Debt. It receives and registers transfers of stock from one public creditor to another, and makes the quarterly payments of the dividends. For this purpose it employs more than 400 clerks, porters, and messengers; and, previous to the passing of the Act of 1833, received from the public, in payment for this service, the sum of 248,000*l.* per annum. Of this amount, 120,000*l.* per annum is now abated in terms of that Act.

No bank having more than six partners can issue bills or notes payable on demand in London, or within sixty-five miles of it, during the continuance of the charter of the Bank of England. The Act of Parliament of 1833, which renewed the charter, made Bank of England notes above 5*l.* a "legal tender," except at the Bank itself, or its branches. Previous to that year, the notes of country bankers were payable in gold: they may now be paid either in gold or in Bank of England notes; and these notes are also just as valid in all payments as gold. Private banks in London, having not more than six partners, may issue notes; but they could not do it profitably in competition with such a powerful and stable body as the Bank of England. The profits of the private bankers are derived in a great measure from the discounting of mercantile bills. They do not allow interest for deposits; for the depositors being chiefly persons in business, whose money in such a place as London is not permitted to lie still, the profit from its use would not justify the allowance of interest.

In 1815, the average of *private* deposits at the Bank of England was between 1,000,000*l.* and 2,000,000*l.*; in 1825 it was about 3,000,000*l.*; and in 1830 it had risen to between 6,000,000*l.* and 7,000,000*l.* From the statements published in the 'Gazette,' it appears that, during last year, the circulation of the Bank was between 17,000,000*l.* and 18,000,000*l.*; the deposits, about 14,000,000*l.*; the securities, between 28,000,000*l.* and 29,000,000*l.*: and the bullion amounted, in March, 1836, to 7,701,000*l.*, and in October to 5,257,000*l.* The last quarterly statement is:—

Quarterly Average of the Weekly Liabilities and Assets of the Bank of England, from January 10 to April 4, 1837, inclusive, published pursuant to the Act 3 and 4 Will. IV., cap. 98.

Liabilities.		Assets.	
Circulation	£18,432,000	Securities.....	£28,843,000
Deposits.....	11,192,000	Bullion	4,071,000
	£29,624,000		£32,914,000

The total amount of loss from forgery sustained by the Bank from 1822 to 1831 was 402,040*l.*; but of this amount no less than 360,214*l.* was sustained in the year 1824, mainly caused by an individual whose fate strongly excited public attention.

The immense mercantile business of London not only gives employment to bullion brokers and bill brokers, but to notaries, the chief business of some of whom consists in noting and protesting bills of exchange. "The practice of noting bills of exchange," says Mr. Gilbart, "is not recognised by the laws of England. It is said to have taken its rise from the following circumstance:—After the modern system of banking had been established, it was customary for one of the clerks of the banking-house to act as notary. If the bill had been presented in the morning, and was not paid, he called in the evening to ask the reason of its non-payment, and charged a small fee for this additional trouble. By degrees the practice became established, and ultimately a notary-public was employed." The difference between the noting and protesting of a bill of exchange is this; in noting, the notary, after having presented the bill at the proper place, and demanded payment, attaches to it a small piece of paper, on which he writes the amount of his charge, and the reason why the bill is not paid—such as "No effects"—"No advice"—"Out, no orders"—"Will be paid to-morrow," &c. This piece of paper is called the notary's ticket, and the writing on it is called the notary's answer. The legal use of a notary is to furnish the proof of the presentation of a bill.

ON THE WINGS AND TAILS OF BIRDS.

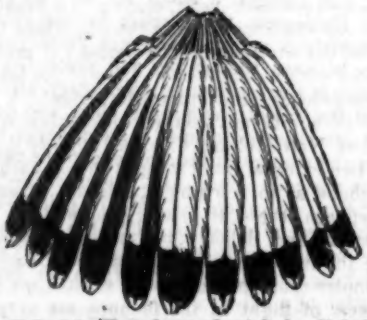
[Concluded from No. 325.]

From the leading modifications exhibited in the *wings* of birds, we turn to those presented by the *tail;* the osseous structure of which, with the mode in which the feathers are ordinarily arranged, has already been pointed out. Even more numerous than those of the wings are the diversities of form and size presented by this organ; diversities more or less directly influencing the character of the flight. In some instances the tail is reduced to a mere rudiment, or is even wanting, and in others it is large and of great length: Nor is it only from its form or size that the tail of the feathered race influences the peculiar manner of flight: the texture and quality of the feathers themselves are of great importance. Where the tail consists of soft plume-like feathers, we may at once set it down that the bird thus furnished is ill adapted for aërial progression; and it will be found, moreover, that the structure of the wings and the nature of the general plumage will invariably correspond with the characters of the tail; for wings well calculated for aërial progression, and a tail unadapted for it, would be a violation of the laws of nature, there being no contradiction of parts and purposes in her ways. On the contrary, if the feathers of the tail be firm, and the barbs close—though the tail itself may not be very ample,—it will be of great avail. There are many examples of birds with small tails being endowed with surprising powers of flight; indeed in most birds of *rapid* flight, the wings, when closed, advance with their points to the end of the tail, or even pass beyond it: we may mention the peregrine falcon, and the swift; in the latter bird the tail-feathers are only ten in number, and are far exceeded by the wings when closed. Where, however, the tail is much reduced, as in the king-fisher, its rudder-like power is evidently diminished, and though the flight may still be rapid, it is necessarily straight and arrow-like, there being no power of sailing in easy circles, or of making abrupt turns and doubles, as we see in the kite on the one hand, and in the swallow on the other.

We need hardly say that in the act of flying, birds expand their tails, and thus the extent of surface is increased to their manifest advantage. Where the wings are ample, and the tail ample at the same time, the flight is easy and graceful; where the tail is short and the wings long and vigorous, the flight is generally rapid and impetuous; but where the tail is long and ample, and the wings rounded and short, as in the magpie, the flight is laborious. The *principal forms* assumed by the tail are as follows:—1, *square*, or even; 2, *rounded;* 3, *graduated regularly* (every feather advancing in due degree), or *irregularly* (some advancing to an extreme beyond the others); 4, *slightly forked with rounded points;* 5, *more or less deeply forked with acute points;* 6, *plumose.*

The size of the tail varies under every modification of form, and the forms themselves differ to a considerable degree, as it regards a very great number of minute particulars; the feathers also composing the tail exhibit an infinity of differences, both in form and texture; we can only therefore generalize on the subject.

No. 1.



[Tail of the Kestrel, spread out during flight.]

The tail of the *kestrel*, No. 1, spread out as during flight, appears as if rounded; when closed, it is square at the extremity, or *nearly* so; the same observation applies to the tails of the peregrine falcon and of the common buzzard, No. 2, which are composed of feathers strong and

No. 2.

[Tail of the Common Buzzard.]

elastic, as are the quill-feathers of the wings; in the birds of prey generally this form obtains, and the tail is ample; in the secretary-bird of Africa, however, the two middle tail-feathers are double the length of the rest; in the *kite*, the tail is *ample* and *forked;* and in one species of eagle it is graduated and wedge-shaped. In humming-birds the tail differs greatly, being deeply forked in some, as in the bar-tailed humming-bird; in others again it is rounded, in others graduated; and often two lateral or two central feathers are greatly elongated. No. 3 represents the rounded tail of one of these most

No. 3.

[Tail of a Humming-bird.]

No. 4.

[Tail of the Heron.]

brilliant of the feathered race: it consists of firm elastic feathers. In No. 4, the tail of the *heron*, we have an example of a moderately rounded form, the shape of the tail when closed tending towards an oval, the greatest breadth being in the centre. In the heron and its allies the tail is short, and covered by the wings when closed. In the *sandpiper* (*totanus*), No. 5, the tail is short and rounded, and consists of small pointed feathers. No. 6, the tail of the coot spread out: when closed it is somewhat wedge-shaped and is very short. Neither in the coot nor in the sand

No. 5.

[Tail of the Sandpiper.]

No. 6.

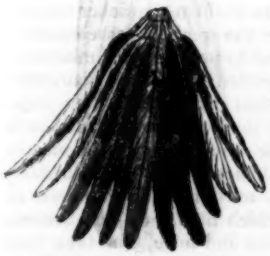
[Tail of the Coot.]

piper does the tail contribute much to the powers of flight. In the sandpipers and their allies, which fly with rapidity and ease, notwithstanding the shortness of the tail the *tertials* of the wings are remarkably elongated, and may probably assist as rudders, while they add, when extended, to the general surface of the body, and thus in two ways atone for the deficiency in the development of the tail. The coot seldom attempts to escape by flight, unless when hard pressed, and then it rather flutters than flies along. When, however, (as is the case with the *grebes*, the *divers*, and other birds in which the tail is very small, but the wings vigorous,) the coot has attained to a certain elevation, its flight is strong and rapid, and capable of being long continued.

The reduction of the tail to almost a nullity is, however, often accompanied by a reduction of the powers of the wing (the form of which is rounded, and the quill-feathers short and lax); and by a full soft plumage, but sometimes (as in the genus *Pitta*) by a metallic plumage, and by a development of the limbs, rendering the birds terrestrial in their habits; their flight is short, feeble, and fluttering, but they run with extreme facility. Among the thrush family we have examples in point. The genus *Pitta* is remarkable for a metallic brilliancy of plumage; the tail is very short, the wings are short and rounded, the limbs large and strong. Again, in *Megapodius*, the plumage is lax, full, and soft, the tail quite rudimentary, and the limbs greatly developed.

On the other hand, we sometimes see an *elongated* and *graduated tail* accompanied with terrestrial habits; indeed, where the tail is *elongated*, and *merely rounded* at the extremity, the wings are usually short, and the flight peculiar. That well-known bird, the pied wagtail, is an example in point; its tail, No. 7, is composed of slender feathers, and it is remarkable both for its length and its vibratory movements. The celerity with which this sprightly little bird trips along must have been often noticed by our readers, as well as the jerking interrupted character of its flight. As an instance of an ample, long, and decidedly *graduated* tail, that of the *magpie*, No. 8, may be taken by way of illustration. To the flight of this bird we have previously alluded; on the ground it runs and hops along with ease. The tail of the magpie is not quite regularly graduated, for the two central feathers more than duly exceed the next in succession.

No. 7.



[Tail of the Pied Wagtail.]

No. 8.

[Tail of the Magpie.]

In the parrakeets (*Parlæornis*) we have examples of irregularly graduated tails, and especially in the Malacca parrakeet; all the tail-feathers are thin and pointed, but tolerably firm: the outermost are very short, but they increase in a regular gradation to the central pair, which are elongated into slender streamers. In their flight these birds are rapid, for their wings are pointed, but they do not continue long on the wing, nor can they soar on motionless pinions, like the vulture or rook. It is very evident, however, that no definite rules respecting the powers of flight can be drawn from the shape of the tail; since we often find a long and graduated tail, not only accompanied with great rapidity, but great endurance of flight. In many of the *humming-birds* it is graduated, and graduated irregularly; in the filamentous-tongued parrakeets of New Holland (*Trycho-glossus*) it is also graduated, and the flight of these birds is rapid as an arrow. In the passenger-pigeon of America it is long and graduated; the flight of this bird, however, is calculated at the ratio of one mile a minute, and capable of being kept up at that speed for six or eight hours at a time, or longer. Some birds of rapid flight have the tail square or wedge-shaped, with two long central feathers extending to a great length. The *tropic-bird*, which is met with only near the Line, between the tropics, and which skims over the sea, soars aloft, or sweeps down like an arrow, has a short wedge-shaped tail with two long central wiry feathers streaming from it.

A *forked tail* is always accompanied by good, or even great, powers of flight, and if the tail be greatly forked, the flight will be not only rapid, but distinguished by the facility with which sudden evolutions and turns are accomplished. In many birds, as in the chaffinch, No. 9, and the lark, No. 10, the tail is slightly forked,

No. 9.

[Tail of the Chaffinch.]

No. 10.

[Tail of the Lark.]

and each part is more or less rounded; in the chaffinch, however, the two central feathers are longer than the two next, which is not the case in the lark, a bird of rapid flight, as it skims over the fields, and capable also of soaring to a vast elevation. The tail of the swallow is a good illustration of a truly forked tail, so is that of the *fork-tailed shrike (Edolius)*; in most species of this genus, the two outer tail-feathers have long slender produced shafts, ending in a broad vane.

A plumose tail is seen in the ostrich, where the quill-feathers of the wings are also plumose; it must not be confounded with a plumose condition of the *tail-coverts*, as in the peacock, and splendid trogon. A plumose tail, but of a different character, is exhibited by the lyre-bird of New Holland (*Menura superba*). It consists of two external lax-feathers (one on each side) of such a shape as to resemble the frame of an ancient lyre; between these rise long filamentous feathers, with distant and delicate barbules, representing the strings; the two central are of a different construction, being stouter than the rest, with a barb on one side. The powers of flight in the menura are very limited. (See 'Penny Magazine,' No. 317, page 92.

As it respects the modification of the tail to serve as an organ capable of being applied to other uses, besides such as are immediately connected with flight, we may notice, first, its adaptation as an aquatic rudder, and secondly, its adaptation as a sustaining and climbing instrument.

Many aquatic birds swim with the body submerged, or partially so, and in such the tail consists of stiff feathers, the shafts resembling stout strips of whalebone, the vanes appearing as if composed of finer strips, closely compacted together. In the New Holland musk duck this character is displayed, but it is better seen in the larger tails of the darta (*Plotus*) and of the cormorant, of which latter bird No. 11 is a sketch

No. 11.

[Tail of the Cormorant.]

of the tail. In form this organ is rounded; each feather is stiff and elastic, and the whole is firm and close. The possession of a rudder to birds which pursue the finny tribes for prey, chasing them with the utmost rapidity, and following up every turn and double with the most wonderful celerity, is, it must be evident, a pre-requisite, without which no extraordinary sub-aquatic evolutions could be executed, and consequently no successful fishery carried on. Deprive the cormorant of his tail, and his powers of sub-aquatic progression would be much diminished. It may here be added that the stiff tail of the cormorant assists to support it, while sitting upright on the shore, or on the ledge of the precipice which it has selected for its observatory.

The adaptation of the tail as a sustaining and climbing instrument, by which birds are enabled to ascend the trunks of trees with facility, and remain adhering to them while they procure their food, (*larvæ* beneath the bark or in the crevices of it,) is exemplified in many birds, and among others in the creeper, (*Certhia familiaris*) of which we give the tail (No. 12). The

No. 12.

[Tail of the Creeper.]

feathers of this organ are not only remarkable for their stiffness, but the shafts are produced beyond the barbs, forming sharp elastic deflected points, which in the perpendicular attitude assumed by the bird in climbing up the stem of a tree, insert themselves into every crevice, and fix against every projection. In the genus *Dendrocolaptes*, the tail is even more adapted as a climbing instrument than in the creeper; but most of all is this peculiarity of structure exemplified in the true or typical woodpeckers, birds in which the formation of the feet and that of the tail co-operate in qualifying them for the mode of life to which their instinct necessarily leads them. The tail is graduated, and composed of ten feathers, of which all, but especially those of the centre, have strong elastic shafts slightly bent inwards, and gradually narrowing to a point which projects beyond the web; nor is this all, the webs themselves, instead of being flat, are obliquely fixed on the shafts, so that their edges touch the tree up which the bird may be climbing. Now these webs, or vanes, are composed of stiff plumelets, much resembling fibres of whalebone, with sharp points; so that, independent of the aid given by the shafts, the webs themselves form so many lines of support, or rather springs of propulsion, aiding the bird in its ascent. It is to be observed that the creepers and the woodpeckers always move in an upward direction along the trunks and branches of trees, from the bark of which they extract their food. The flight of the woodpecker consists of a series of undulations performed by a rapid action of the wings, and is far from being destitute of quickness.

Here we close our hasty survey of the structure and peculiarities observable in the wings and tails of the feathered race; let those who have opportunity follow up the hints we have given, and draw up for themselves a series of deductions on a point in natural history, to which at present but little attention has been paid—viz., the connexion between the peculiarity of flight, and the modification of the organs by which it is performed. If the birds of foreign lands are beyond our notice in a state of nature, those of our own country invite the attention of all who wish to observe and think for themselves.

BALTIC OR GERMAN PROVINCES OF RUSSIA.

(Concluded from No. 327.)

Rye, wheat, oats, barley, buckwheat, peas, potatoes, flax, and hemp, form the chief products of the soil, which, in spite of an utter want of attention to very extensive causes of waste, that are guarded against by better care in England, yields well and profitably. The gathering of the corn into sheaves is performed most clumsily and negligently. It is then stacked on the field in small heaps resembling haycocks, which are rudely thatched. Drag-rakes and gleaning are unknown; pigs are then turned into the stubble, and also poultry, particularly geese and turkeys, to gain, with an infinite number of small birds, their daily meal. They generally fatten well, making, as often as not, the little corn-ricks yield them a quicker supply than what they gain from the reaper's carelessness. Children are usually employed to prevent such mischief; but, as it is not to be expected that these poor little creatures should possess that attention which their parents neither practise nor inculcate, their presence is but of little use beyond the moment when the master or his bailiff come near while prosecuting their daily rounds. These little ricks are gradually removed as the corn is thrashed, by which time each has become inhabited by colonies of rats and mice, who take their turn to be fatted. The clumsy little carts, with their ladder-like sides, and not very round wooden wheels, in which the corn is conveyed to the barns, scatter a continued track of grain in their path. In the barns, thieving is so generally practised by all who share in the labour of preparing the corn for sale, that it is looked upon as a necessary evil, and seldom attempted to be radically checked. The peasant considers it no sin to take a small portion of his lord's abundance; and while no attempt is made to raise the low state of intellect, moral and physical, in which the peasant now vegetates, no change can be hoped for in such a system of evil to all parties. The grain, which is always kiln

dried before thrashing, is now placed in the granaries, where, as in the little ricks, it is equally exposed to the inroad of vermin; and yet, in spite of all these causes of diminution, the return is usually eight and ten fold in rye and wheat, and larger in barley and oats.

We must not here omit to mention the ordinary manner in which the land is cultivated, as another proof of the fertility of the soil, which, even under the present existing innumerable disadvantages, yields to the amount we have just stated. The most general course of agriculture is triennial: the first year producing a crop of rye or wheat; the second year barley or oats; and the third the field lies fallow. Potatoes, flax, &c., are generally raised upon some extra piece of waste land, newly broken up, or, if cultivated to a greater extent, take the place of the summer corn in the second course.

The fallow-field is ploughed but once after the crop is taken off, at which time, generally early in the summer, the manure is carried on, spread about, and left to dry in the sun, losing all its invigorating properties, till the sowing season in the autumn returns. The ploughs, if such they can be called, consist of one, and in some instances of two thick sticks, sharpened and pointed with iron, and fixed in a frame, which is dragged by a horse, and guided by a man or woman. They are, in the country, most appropriately called pig's noses, for certainly the unringed snouts of a few pigs would turn over the soil as effectually as these misnamed ploughs. The land indeed looks as if merely scratched over by a parcel of children at play, and the wonder must be, how nourishment enough can exist to support the roots of the grain. The harrows are in keeping with the ploughs; made of a few cross sticks with wooden teeth fastened to them.

Under-draining is probably unknown there; even ditches to carry off the melting of the snows from the surface are few and far between. Great injury often results to the crops from these circumstances; but this is seldom attributed to the right cause, and it is not likely to be obviated till science forces its way among the higher classes, and more enlightened views towards the people in general are entertained by them.

Within the last few years, some attention has been paid by landholders to the breeding of merino sheep, and the improvement of their own flocks. Clover has also been cultivated for the support of them, which, with judicious care, would become as certain a crop as in our more favoured climate: at present the severe frosts acting upon undrained land, saturated with moisture, often destroy it, still the attempt promises so much of success as to be persevered in by many. Several estates already possess some thousands of sheep. The wool is considered equal to the real Saxon merino, and has occasionally been exported to Russia and England; but since the erection lately of two large cloth manufactories, one on the island Dagau, near Revel, by Baron Ungern Sternberg, and the other at Zintenhof, a crown estate near Pernau, by M. Wörmann, a wealthy merchant in Riga, the supply for home consumption has not been found sufficient.

The population of these provinces, not being in proportion to their agricultural products, large quantities of corn and flax are annually shipped to England, Spain, and Portugal. A considerable portion is also used in the distillation of spirits, which are drank largely by almost every class of society. The surplus production of this pernicious beverage finds a ready sale in the interior of Russia.

Rye and malted barley are the grain principally used for this purpose, but mashed wheat has been found, though bearing a higher price, to answer well, as it yields a much greater proportion of spirit. Potatoes are also used for distillation, and where the soil is favourable are grown largely. The oxen are fatted with the hot mash or grains from the distillery, a portion of which is also daily given to the cows and young stock. This forms the only change in their food from hay, chaff, and chopped straw; the variety of turnips, mangel wurzel, carrots, cabbages, &c., with which our cattle are so daintily fed, being utterly unknown there. In consequence of this want of other sources of food beyond the very ordinary hay of the marsh and meadow lands, which, having never been in any way cultivated, drained, or cleaned, yield a very scanty and uncertain crop, a cold or wet spring is a sure harbinger of hunger to all the herds of cattle in the country. This suffering falls particularly on the cows and young stock, for the working and fatting oxen being of more value, are kept well fed at the expense of the others. Great mortality frequently takes place, which is attributed to any but the real cause; the peasant imputing it to the evil eye of some secret enemy, or other influences of the black art; and the lord, again, to the wilful neglect of his servants. Should the poor animals not have spent their last breath by the return of spring, they are helped on to their legs, and, tottering out, soon regain from the unassisted hand of nature that strength of which they had been deprived, in consequence of their owners neglecting the resources and facilities which are available. The supply of milk and butter from such cows is of course very deficient, 30lbs. to 35 lbs. of butter during the twelvemonth being considered there an ample produce for a thriving cow. In England the instances are not rare, where a cow has yielded from 15lbs. to 20lbs. of butter weekly, for several weeks in succession; and we may fairly take the average at from 8lbs. to 10lbs. weekly as the general standard during the time in which they give milk.

The attention to the distillery and to the cattle, the thrashing the corn, the reparation of stone-fences, doors, gates, &c., and the felling and fetching of their sole fuel, wood,—naturally form the sum of the winter agricultural employments in a country where the soil is at that season frozen to the depth of several feet. In consequence of the diminution of out-door work, the women are dismissed from their hard field-labour, and from Michaelmas till Lady Day are employed in spinning and weaving a certain quantity of flax and wool for the thrifty dame of the mansion, which quantity, like their working days in summer, is regulated according to the size of the farm to which they belong. This period is an important one to all the provincial country ladies, be they baronesses or countesses; for as their servants, with few exceptions, are all peasants, who receive no other wages than their clothing, all of which is manufactured at home, much care and forethought are necessary to provide a sufficient quantity both for men and women, for winter and for summer wear. Besides this, her own linen-press must be supplied; and the most expert maidens on the estate are selected, and the best flax and wool sorted, for the production of linens and flannels fit for her own wear, and all the necessary additions to her household stores. From these the best pieces are yearly selected, if she be the mother of a daughter, to form the dowry of the maiden when she shall relinquish the privileges of her freedom, and in her turn enter upon the duties of providing for the food and clothing of those around her. These dowries are generally commenced within the first year after the birth of their object; and great is the pride,—heartfelt the satisfaction of the mother who sees the strictness with which she has watched her spinners and weavers crowned with success,—and the great oaken iron-banded chests, ponderous with their contents, ranged in order, to await the arrival of the successful candidate for her daughter's hand. This custom is common to the peasantry as well as to their lords, with the dif-

ference only that the stores collected consist more of outward apparel than in linen for household purposes: and it would make a poor woman of this country stare to see the piles of gaudily striped thick woollen petticoats; of grey cloth jackets; of dark brown great-coats, made from the wool of black sheep without any further dye; of sheep-skin wrappers, with the wool inwards, and the white leather surface ornamented with many fantastic lines of crimson or black morocco leather; of gay glass-bead necklaces, to which are attached often as many as a dozen pieces of silver money of the size of crown pieces (the Russian silver ruble); of knitted worsted stockings and gloves, and of gay silk caps, ornamented with long ribands, lace, and tinsel,—which at a peasant's wedding are spread forth to excite the admiration or envy of those not able to fit out their daughters with equal munificence.

Portsmouth.—In No. 323 of the 'Penny Magazine,' it is stated (page 141) that the municipal borough of Portsmouth is divided into *seven* wards. This is the number in the schedule annexed to the Municipal Corporations Reform Act. But the barrister who, under the provisions of the act, divided the borough into wards, availed himself of a discretionary power given by the act, of increasing or diminishing the number of wards in certain cases by *one*, and divided the municipal borough of Portsmouth not into seven but into *six* wards.

The Lilac.—The common lilac was, till lately, thought to be exclusively a native of Persia, but, within the last few years, it has been found by Dr. Baumgarten in Transylvania. The blue and the white varieties were cultivated by Gerard and Parkinson, in 1597, under the name of the Blue Pipe and White Pipe; and, apparently, confounded with *Philadélphus*, which was also called Pipe Tree. The first time the lilac was made known to European botanists was by a plant brought from Constantinople to Vienna by the ambassador Busbequius, towards the end of the sixteenth century. From the plant being very showy, of the easiest culture, and extremely hardy, it soon spread rapidly throughout the gardens of Europe. In some parts of Britain and various parts of Germany, it is mixed with other shrubs, or planted alone, to form garden-hedges; and, as a proof of its hardiness, we may mention that there are hedges of it by the road-sides in the neighbourhood of Ulm and Augsburg, in the elevated, and consequently cold, region of Bavaria. —*Arboretum Britannicum.*

The Clydesdale Orchards.—Orchards are of considerable antiquity on the Clyde. Merlin, the poet, about the middle of the fifth century, celebrates Clydesdale for its fruit. The soil and climate being inland, and consequently free from the blasting influence of mildews and fogs, may account for its being so favourable for the cultivation of orchards. At first, they were planted in the shape of gardens, attached to houses for the accommodation of the resident families. For two centuries or more, they have been cultivated as a source of profit; they chiefly prevail, and are most extensive and productive, on the north bank of the Clyde, having a southern exposure, though on the south bank there are also a considerable number, and some of them very fruitful. Those of Cambusnethan, the property of R. Lockhart, Esq., of Castlehill, and of J. G. C. Hamilton, Esq., of Dalziel, are the most extensive, and among the most productive. The fruit in the former has some years brought 800*l.*, and in the latter 600*l.* The orchards are in general planted on sloping banks, otherwise only fit for the growth of forest trees. In consequence, however, of their having been found profitable, especially during the late wars, when foreign fruit was in a great measure excluded, and even that from England and Ireland was with difficulty brought to our markets, a considerable quantity of ground was planted with fruit-trees, which was well adapted for any species of husbandry. In some cases, too, when a person had an orchard, but not of sufficient extent to make it an object of attention to a purchaser, he has been induced to enlarge it, by planting land, which, in other circumstances, would not have been so occupied. But it may be remarked, there is no profit in planting land with fruit-trees which would yield a rent of 2*l.*, 3*l.*, or 4*l.* per acre. The soil of many of the orchards is naturally a stiff clay, and the most thriving trees and the finest fruit is in general to be found on the poorest land, provided due attention has been paid to the cultivation of the orchard. The average is now four bolls per acre, at 2*l.* 10*s.* per boll. The value of the orchards has of late years greatly decreased.—*Statistical Account of Scotland.*

Great Wild Bull Hunt in Poland.—Since the brilliant chases of the urus (a sort of bison, of Poland,) of King Augustus III.'s time, in the forest of Bialowicz, of which the fame has been perpetuated by an obelisk with many sounding inscriptions, erected in 1753, in the centre of that ancient forest, these countries have no longer been frequented by hunters, and the sport itself has been proscribed, even under pain of death. Very recently, however, a grand hunt took place, and by appointment of the Russian government, at Bialowicz. The governor-general of the province, Prince Dolgorukow, had fixed the time for the 12th of October (1836), and upon that day arrived from Wilna at the rendezvous, where a great number of hunters and spectators had already assembled. The Chasseurs and Traqueurs mustered nearly 2,000. Some days before they had tracked, and concentrated within the warren, a quarter of the forest forming an angle between two rivers, a troop of about twenty bisons; and to prevent these wild animals from escaping, a circle of fires was kept constantly burning for several days and nights. At eleven in the morning Prince Dolgorukow arrived at the place of meeting in the very heart of the forest, and, after a plentiful breakfast, took his place upon a spacious stage, which had been raised of the white fir for his accommodation and that of his visiters. A signal being given, the trackers proceeded to rouse the brakes. Some time, however, elapsed before the game made its appearance, and it began to be feared that the whole would end in disappointment; when all at once three bisons rushed from the cover, and made, at a full gallop and in a direct line, towards the platform. They had reached with great impetuosity within 200 yards, when one of the chasseurs indiscreetly fired at the leader, but the ball missed, and had only the effect of spoiling sport, for the animals, affrighted, turned about and fled to cover. The sport again flagged for a time, and the prince was beginning to despair, when suddenly emerging from a dense part of the forest, within fifty yards of the stage, another troop of enormous ures, having at their head a male of immense size, and whose long beard floated in the wind, were perceived. The animals directed their course towards the spectators; but the leader was soon struck by a bullet from a gun fired by the prince himself, and this, succeeded by three other shots from princes on the stage, made the bull reel some 200 paces, where he fell and was killed. The general shout, by which this feat was accompanied, proved that the greatest of the wanderers in the ancient forest of Bialowicz had then been prostrated. The chase soon after terminated; but a few particulars respecting these animals, which are but little known, may not be uninteresting. It appears that they feed almost exclusively upon a wild herb called *tomka*; for, in the severe winters, when this fails them, they perish in great numbers. This is the reason why they are only to be met with in this forest, which, because of the abundance of the grass in question, is called "green" by the country people. As a sort of memorial of this famous hunting-match, every body present carried away a fist full of this grass, which has a strong smell, and something of an almond taste, particularly when dried. In cutting up the ure, the hunters remarked about the head a strong scent of musk, the brain being, it is known, the chief depository of that substance. The flesh may be eaten, though it has a wild flavour: the party partook of it. The skin is very strong, but wants suppleness.—*Journal de Frankfort.*

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